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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,604	09/26/2003	Mathilde Benveniste	AVA04-01	3701
22468 7590 01/09/2007 CHAPIN & HUANG L.L.C. WESTBOROUGH OFFICE PARK 1700 WEST PARK DRIVE WESTBOROUGH, MA 01581			EXAMINER CASCA, FRED A	
			ART UNIT 2617	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/672,604

Applicant(s)

BENVENISTE, MATHILDE

Examiner

Fred A. Casca

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage ____ application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/26/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections – 35 U.S.C. 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-7, 12, and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Sherman (US 2003/0161340 A1).

Referring to claim 1, Sherman discloses an apparatus (figure 1) comprising a receiver for receiving a first frame via a shared-communications channel (figures 1-2C, and paragraphs 33-36, 38, and 41-43, “MS101”, “wireless network”, “frame 210”); and

a processor for generating a second frame that comprises both a data payload and an acknowledgement of the receipt of said first frame (figures 1-2C and paragraphs 5, 8, 28-31 and 40, “A frame sent from the STA to the PC may include an acknowledgment of a data frame just received from the PC”, “Acknowledgements and polls may be “piggybacked” on data frames, permitting a wide variety of allowed frame sequences”, “Correct reception of RR frames received during a CCI is acknowledged in the next transmitted CC frame”, note that a second and subsequent other frames are generated that comprise data payload piggybacked with an ACK, and a processor inherently exists that generates such frames).

Referring to claim 12, claim 12 defines a communication method reciting features analogous to the features of the communication apparatus defined by claim 1 (as rejected above). Thus, the Sherman discloses all elements of claim 12 (please see the rejection of claim 1 above).

Referring to claims 3 and 14, Sherman discloses the apparatus and method of claims 1 and 12 and further discloses a transmitter for transmitting the second frame via the shared-communications channel (1-2C and paragraphs 5, 8, 28-31).

Referring to claims 4 and 15, Sherman discloses the apparatus and method of claims 3 and 14 wherein the receiver and the transmitter are IEEE 802.11 compliant (paragraphs 5, 8, 28-31).

Referring to claims 5, Sherman discloses the apparatus of claim 1 further comprising a host interface for receiving the data payload from the host computer (figures 1-2C and paragraphs 5, 8, 28-31).

Referring to claims 6 and 16, Sherman discloses the apparatus and method of claims 1 and 12 wherein the second frame also comprises a poll (figures 1-2C and paragraphs 5, 8, 28-31 and 40).

Referring to claims 7 and 17, Sherman discloses the apparatus and method of claims 1 and 12, and further disclose the first frame comprises an acknowledgement of the receipt of the third frame and second frame comprises an acknowledgement (figures 1-2C and paragraphs 5, 8, 28-31 and 40, note that acknowledgements can be piggybacked to any data frame to acknowledge the receipt of any previous frames).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Chintada et al (US Pub. No. 2002/0118667 A1).

Referring to claims 2 and 13, Sherman discloses the apparatus and method of claims 1 and 12.

Sherman does not specifically disclose the processor is also encrypting at least one bit of said second frame.

Chintada discloses encrypting data in a frame (paragraph 35).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus and method of Sherman by incorporating the teachings of Chintada for the purpose of creating a secure communication system.

5. Claims 8, 10-11, 18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Dickson (US Pub. No. 2004/0037320 A1).

Referring to claim 8, Sherman discloses an apparatus (figure 1) comprising:

(i) a first station (paragraph 5, "Hybrid Coordinator (HC)") for:

(a) transmitting a first frame comprising a first poll to a second station (figures 1-2C and paragraph 5, "The HC generally grants the use of medium to a STA by polling it"); and

(b) transmitting a second frame comprising a first acknowledgement and a second poll to said second station (figures 1-2C and paragraphs 5, 8, 28-31, 33-38, "protocols provide

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centralized control of the wireless media during specified periods of time”, “IEEE 802.11 standard defines over-the-air protocols necessary to support”, “a requesting STA may transmit one frame for each CF-POLL received. The STA responds with a null data frame if there is no traffic to send”, “A frame sent from the STA to the PC may include an acknowledgement of a data frame”, “The PC may use a minimal spacing of SIFS between frame to a STA, a responding frame includes an acknowledgement using a SIFS interval between the data and acknowledgement”, “Acknowledgement and polls may be “piggybacked” on data frames, permitting a wide variety of sequences”, note that in a contention-free protocol e.g., 802.11 standards a second frame comprising an ACK and a second poll is inherent); and

(ii) said second station for:

(a) generating said third frame comprising a data payload and a second acknowledgement (figures 1-2C and paragraphs 5, 8, 28-31, 33-38, note that in a contention-free protocol system once a channel is assigned to a portable host and the portable host starts transmitting data, the data and acknowledgements are inherently transmitted to a controlling device, e.g., the HC via a third frame. Thus, a third frame is inherently generated); and

(b) transmitting said third frame to said first station (figures 1-2C and paragraphs 5, 8, 28-31, 33-38, note that in a contention-free protocol system once a channel is assigned to a portable host and the portable host starts transmitting data, the data and acknowledgements are inherently transmitted to a controlling device, e.g., the HC via a third frame. Thus, a third frame is inherently generated and transmitted).

Sherman does not specifically disclose the **second frame is available before a third frame is transmitted**, third frame is generated before transmitting of the first frame, and third frame is **available before said transmitting of said second frame**.

Dickson discloses transmission frames can be generated beforehand and used as needed (paragraphs 32-33, and 91, "transmission frames can be generated before all of the data frames to be bundled have been received")

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of Sherman by incorporating the teachings of Dickson for the purpose of providing an efficient communications system where delay is prevented since frames are generated in advance.

Referring to claim 18, claim 18 defines a communication method reciting features analogous to the features of the communication apparatus defined by claim 8 (as rejected above). Thus, the combinations of Sherman/Dickson disclose all elements of claim 18 (please see the rejection of claim 8 above).

Referring to claim 10, the combination of Sherman/Dickson discloses the apparatus of claim 8 and further disclose a host computer for generating said data payload (Sherman, figures 1-2C and paragraphs 5, 8, 28-31, 33-38, note that frames are inherently generated by a computer).

Referring to claim 11, the combination of Sherman/Dickson disclose the apparatus of claim 8 wherein said first station is at least one of an access point, a point coordinator, and a hybrid coordinator (Sherman, figures 1-2C).

Referring to claim 20, the combination of Sherman/Dickson disclose the apparatus of claim 18 and further disclose transmitting is in accordance with an IEEE 802.11 protocol over a shared-communications channel (Sherman, paragraphs 5 and 28).

Referring to claim 21, the combinations of Sherman/Dickson disclose the method of claim 18 and further disclose transferring data payload from a host computer to the second station (Sherman, Figure 1).

Referring to claim 22, the combinations of Sherman/Dickson disclose the method of claim 18 and further disclose the second frame also comprises data (Sherman, figures 1-2C and paragraphs 5, 8, 28-31, 33-38).

6. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Dickson (US Pub. No. 2004/0037320 A1) and further in view of Chintada et al (US Pub. No. 2002/0118667 A1).

Referring to claims 9 and 19, the combinations of Sherman/Dickson disclose the apparatus and method of claims 8 and 18.

The combinations of Sherman/Dickson does not disclose encrypting at least one bit of said third frame before said transmitting of said first frame.

Chintada discloses encrypting data in a frame (paragraph 35).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus and method of Sherman/Dickson by incorporating the teachings of Chintada for the purpose of creating a secure communication system.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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SUPERVISORY PRIMARY EXAMINER